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THE LOAN AGAINSTTHE PARTNERSHIP EFFECT ON PRODUCT PRICE (THE CAUSE OF PRICE INCREASE: A THEORETICAL VIEW)

PENGARUH PINJAMAN DALAM KEMITRAAN UNTUK PENENTUAN HARGA PRODUK (PENYEBAB PENINGKATAN HARGA: A THEORETICAL VIEW)

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ABSTRACT

Kenaikan harga berbagai produk (termasuk produk agroindustri) terjadi setiap saat tanpa ada indikasi akan berhenti. Masyarakat beranggapan diantara penyebabnya adalah inflasi. Tetapi jika dicermati, sebenarnya angka-angka inflasi itu diperoleh dari rumus yang melibatkan data harga sebelum dan data harga setelah kenaikan terjadi. Rumus tersebut menunjukkan bahwa kenaikan harga adalah penyebab inflasi, bukan sebaliknya. Tujuan artikel ini adalah untuk mengeksplorasi dan menganalisis dua sistem pembiayaan sehingga diperoleh formulasi matematik sebagai dasar untuk menentukan akar penyebab kenaikan harga. Metode komparasi dan logika sebab akibat digunakan untuk mencapai tujuan tersebut. Selanjutnya, setiap sistem pembiayaan yang dibandingkan dimodelkan untuk mendapatkan peubah-peubah yang diperlukan.Hasil kajian menunjukkan bahwa naiknya harga-harga produk disebabkan oleh sejumlah faktor penentu harga antara lain bunga pinjaman. Dari contoh perhitungan secara numerik mengkonfirmasi bahwa harga yang ditetapkan dalam sistem pembiayaan dengan pinjaman berbunga (interest-bearing loan system) *lebih tinggi karena memiliki faktor yang lebih banyak dibandingkan dengan harga pada sistem pembiayaan kemitraan* (partnership system). *Hasil kajian menyimpulkan bahwa kenaikan harga-harga akan terus berlangsung sampai para produsen produk (agroindustri) mulai beralih menerapkan sistem pembiayaan partnership sebagai pengganti sistem pembiayaan berbunga.Hasil temuan kajian menyimpulkan lebih lanjut bahwa inflasi bukan penyebab kenaikan harga.*

Kata kunci: Kenaikan harga, inflasi, pembiayaan berbunga, pembiayaan kemitraan.

ABSTRAK

Products price, including those of agroindustry, keeps increasing constantly with no indication of stopping. By default, people comprehend the cause of price increase is attributable to inflation. In fact, the inflation is determined based on the price before and the price after increase. It implies that the price increase is the cause of inflation not vice versa.This article was intended to explore and analyze two types of financing system so as to formulate a mathematical expression as a basis to find the root of the cause of price increase. The comparison method and cause-and-effect were used to undertake the objective. Each of the two compared financing systems is modeled in order to extract necessary variables.The results show that the high price is due to the number of comprising elements of the price especially interest rate of the loan. Numerical example substantiates that the interest-bearing loan system forces business to set price to contain more variables in order to keep the business operating while the partnership system shows a significant contrast. Out of the findings the articleconcludes that the price increase will never be stopped until businesses(agroindustry) start implementing partnership financing system in place of interest-bearing. The article further infers that the inflation is absent from the causing factors of the price increase.

Keywords: price increase, inflation, interest-bearing loan system, partnership system

INTRODUCTION

In today's economic environment almost everyone witnesses and experiences what so called price increase. The astonishing condition of this situation is that people tend to be skeptical on this issue due to the fact that the price keeps increasing with no indication of stopping. When price of an item of goods or services happens to increase, it is almost likely to be followed by the increase of the price of another items of goods or servicesso as to equate the previously increase.As a result, price increase has no longer become a main concern for people to think because they are occupied on how to cope with their harder and harder fulfilling daily needs (Weller and Chaurushiya, 2004; Suseno and Astiyah, 2009).

At present, the only simple thing people can do in dealing with this increase is to condition themselves with this repetitive increasing price behavior. One of the easiest ways is to do more work, work harder and work longer in the hope of

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getting more income to offset the deficient. This condition is by contrast with those of several decades ago when people were very sensitive to the price increase as indicated by social movement requesting authorities to stabilize the price or even to restore the price to the level where it used to be.

One of the main reasons to the people reaction as mentioned above is that most of them know that the main cause of price increase is the invincible "creature" called inflation. Every time the price increases, the term inflation will be explained and mentioned continuously along with its convincing numerical proof in order to find the causes to inflation (see for examples Franz, 1978; Mishkin, 1984; Saenz, 2011; Bagus *et al*, 2014). With this convincing setting, the majority of people almost have no choice but to accept this so popular economic jargon. It can be meant that as long as the inflation exists, there will be no remedy for price increase, i.e. price will increase again and again with no end and always be adjusted by inflation (Casares, 2002).

In order to verify whether or not the inflation is the main cause of price increase, it can be seen from the fact that inflation is calculated based on the price before and after increase whether it is daily, weekly, monthly, or yearly basis. By using this method, it is not surprising if the reported inflation is mostly of insignificant figure. The use of inflation as a tool to measure the price increase can be best understood by using analogy of stepping on stairways in a building (Figure 1a) or traveling a long journey (Figure 1b). In the case of inflation, regardless of how many stairs they are, the inflation will always count only one stair because the base stair used to count the next stair is the previous stair and not the very first stair. It can be seen that if someone is now in the 6th stair, he feels he has gone up high enough. In the case of inflation, however, he feels that he only goes up one stair, which is from the 5th to the 6th stair. Likewise, someone who has traveled 1000 miles, he considers only travels 1 mile or even only one step.

Based on the inflation formula (Appelbaum, 2004), the method to calculate inflation can be regarded as having "memorylessness" property in which the current price of the previous inflat-ion will become the old price of the next inflation and the new price will be set as current price. In this manner, it is obvious that the initial or the original price – the first stair in Figure 1a or the first mile in Figure 1b – is forgotten and repeatedly replaced by the new emergingprice.

A numerical example using statistical data of Indonesia Bureau of Statistics (BPS, 2010) in Table 1 and its associated chart in Figure 2 clarify the price increase and inflation properties. Notice from both Table 1 as well as Figure 2 that due to the different base of calculation price increase and inflation show distinctive characteristics.While price increase plot has gone up so high since its beginning in 2010, inflation plot tends to fluctuate and even in some points it shows a nice turn where inflation is so low. This phenomenon can be deceiving in the sense that when inflation is reported only 0.21%, in reality the price actually has gone up 51.44% higher than the price of 2010.

Table 1. Domestic price of rice by year (IDR/kg.)

Year	Prince (IDR)	Price Increase*)	Yearly Inflation*)
2010	7,617	-	-
2011	7,890	3,58	3,58
2012	8,643	13,47	9,54
2013	8,941	17,38	3,45
2014	9,638	26,53	7,80
2015	10,915	43,30	13,25
2016	11,511	51,12	5,46
2017	11,535	51,44	0,21
2018	12,050	58,20	4,46

Source: Indonesian Central Bureau of Statictic, 2018
*) = Calculated

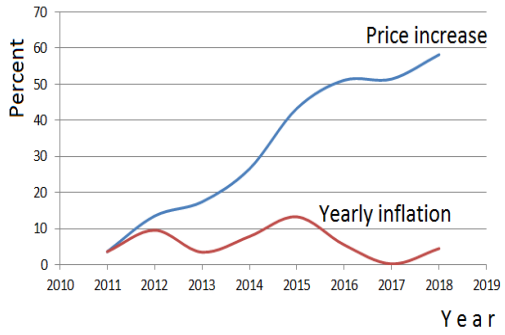

Figure 2. Plot of price increase and yearly inflation of Indonesian rice price

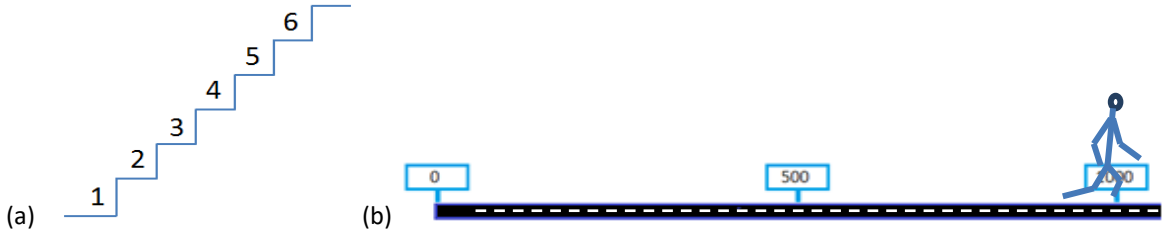

Figure 1. A stairway step and a long travel analogy for inflation calculation

From the above point of view, it is noticeable that inflation is actually dependent variable that relies heavily on two variables: the previous price and the current price. It is also obvious that if there is no price increase, there will be no inflation, i.e. the inflation is zero. Using this logic it is clear that inflation is not the cause of price increase, but rather, the price increase causes the inflation to exist – base on the formula, the inflation will always be greater than zero every time current price is greater than the previous price. Therefore, if it is not inflation, then it is very important to find out the real cause of the price increase.

Objective and Method

This article is intended to explore and go further into some details analysis and explanation with the intention of formulating a mathematical expression,theoretically,in order to provide evidence as a basis to find solution for price increase.So far, the issue of inflation has been in the matter of calculation in which if the reported inflation is zero or negative, it does not mean that the "ghost" of inflation has disappeared. Furthermore, if inflation is zero or negative, it does not mean that there is no price increase. For sure, evidently, in the next subsequent calculation the inflation will, sooner or later,reemerge. The inflation is just like "false flag" operation to which the blame will be put for any case of price increase.

To achieve the objective, this article appliesa comparison method inwhich two types of financing system being explored and analyzed,and thentheir effects on the price of the manufactured product are compared.The effect of the loan system on the monetary policies has been long attracted economists to deal with especially in the macro level such as economic stabilization and money supply policies(Hall, 1977; Ball, 1993).

Despite the fact that there may be more than two types of financing system, this article tries to limit itself by selecting two of the most common financing systems known today: The loan and the partnership system. The main concern of this selection is to get a significant comparison while simplifying understanding of the effect of such system to the price of the product. In addition, the approach used in this article may be different from those of customers-based pricing strategy and other setting (Dolgui and Proth, 2010; Bonnici and Channon, 2014; Gopinath, 2015). In term of level of study, this article is focusing on partnership system in micro level of production system and so this article is a little different from those partnership studies in the public-private sector partnership (Fontagne *et al.*, 2008; Patrinos *et al.*, 2009).

A cause-and-effect relationship will be used as an approach in analyzing the two financing system on product price. It is important to note that the use of this approach may be different from those of economic approaches, such as Zimbroff, A. D. and Schlake (2015), in that the article views price as the effect of investment. However, this approach is intentionally made in order to come up with a new perspective as an alternative for understanding the real cause of price increaseso as to demystify the inflation as common belief to be the main cause.

Problem Definition

The problem this article intends to explore is described as an investment case as follows: An entrepreneur has a great product idea to manufacture that he believes, based on his feasibility study, it will be accepted in market place. Unfortunately, he has no money to execute the idea. Then, he seeks for help to the Bank and the Bank agrees to support him with loan for investment as well as for working capital with some conditions: In addition to collateral he must repay the loan along with its interest accordingly base on the agreed schedule. With these loans in hand he begins commencing his whole idea from start to operation (Behrens and Hawranek, 1991). Now, he is facing the problem of how to secure his schedule for returning his loans plus their interest to the Bank while making profit for himself and his company.

Some Basic Definitions

Even though the term **Bank**has been widely known, this article however defines bank as a business offering financial services, which is a business that keeps money for individuals or companies, exchanges currencies, makes loans, and offers other financial services. In relation to the Bank, the term **loan** or **money lent** is defined asan amount of money given to somebody on the condition that it will be paid back later. The condition that has to be agreed in term of Bank and loan is **interest**. Therefore, in this article interest refers to borrowing charge or payment for money use: a charge made for a loan or credit facility, or a payment made by a bank or other financial institution for the use of money deposited in an account (Encarta dictionary tools, 2005).

In relation to borrowing money, the borrower will use the borrowed money for two reasons: To build a production facility, called **investment**, and to run the production facility to manufacture products, called **working capital**.

On the other side, the term **partnership**is used as oppose to money lent. In this article the partnership is defined as a company owned by partners:A company set up by two or more people who put money into the business and who share the financial risks and profits.

RESULT AND DISCUSSION

Interest-Bearing Loan Financing System

The problem described in the previous section is a typical case of running business in the economic system in which there is almost no

business activities run without financial support from the Bank. In this article, this type of banking system will be called **interest-bearing loan financing system**. In this type of environment the existence of Bank is inevitable since if there is no Bank, there will be no money which eventually lead to there is no business.

From the other view, however, such a system forces business to do extra to get high revenue in order to repay the loan along with its interest. Every time a business gets money from the Bank through loan, it will use up all the money to pay any business expenses. In order to clarify the process, let's recall the above problem and reconfigure it as representation in Figure 3.

Of Figure 3, it can be drawn some important variables so as to simplify the problem. Let X_i and I_i denote the money borrowed for investment and its interest respectively. Similarly let X_w and I_w for working capital and its interest respectively. By these notations, it can be inferred that X_i is sum of money that will be expended for land, building, machinery, equipment, vehicle, etc. In other words, all X_i will be converted into physical form called production facilities. After these expenses, the borrower is out of money and for sure at this time he is not able to return the loan. Unfortunately, the Bank will not accept the just built facilities as a loan payment. Consequently, the borrower must run the facilities and start producing saleable product.

Therefore, in order to run these facilities, the working capital X_w is required. In this case all $X_w$will be used for raw material, worker, utility, energy, administrative, etc. In other words, X_w will be converted into product; let denote its quantity as Q. Having done these, the business has no X_i nor $X_w$left but Q with which it must recover or regain both X_i and X_w. Not only those, since X_i and X_w are loan, the business must also collect additional gain to pay their interests, I_i and I_w.

The only thing that business can do to regain its converted money, X_i and X_w, is to set the price on every unit of manufactured product Q in such manner so that satisfying its needs while maintaining customer's willingness to pay. These conflicting objectivescan be formulated by evaluating some price setting options, say it P_i, by which Q will be multiplied to get revenue, R_i (Zimbroff and Schlake, 2015). It is easy to see that depending on the set price level, P_i, R_i will be at some level whether it is high or low.However, since all or some of the used up are from the loan, the targeted revenue, say it as R_t which equals to Q multiplied by targeted price P_t,must be at least as high as the sum of X_i, I_i, X_w, I_w, and expected profit π. Mathematically it can be represented in an inequality expression as follows:

$$R_t = Q \times P_t \geq X_i + I_i + X_w + I_w + \pi$$

Since Q is given, P_t is just like container to contain each element for X_i, I_i, X_w, I_w, and π. It is worth noticing from the above expression that $X_i + I_i + X_w + I_w$ will not be retained since they will soon be sent back to the Bank as costs for loan payment. Hence, the only remain is π and it is common practice that every business wants to maximize profit (Ngai *et al.*, 2016). By looking at the above expression, it seems that there is no alternative to maximize profit except by raising the price. Actually, in this way profit will not be maximized because most of the R_t will go to the Bank as illustrated in Figure 4.

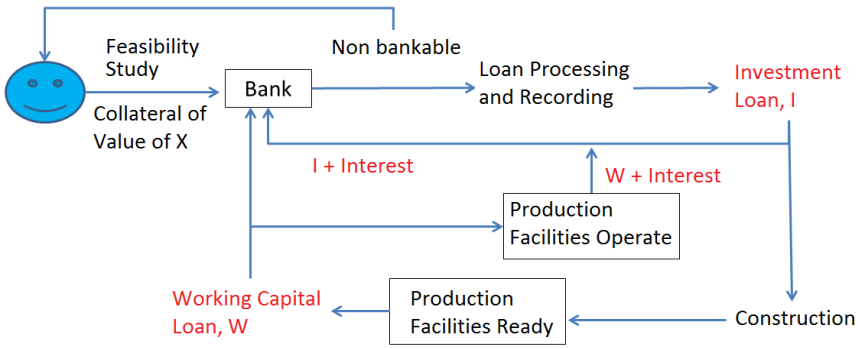

Figure 3. Interest-bearing loan financing system representation of the problem under study

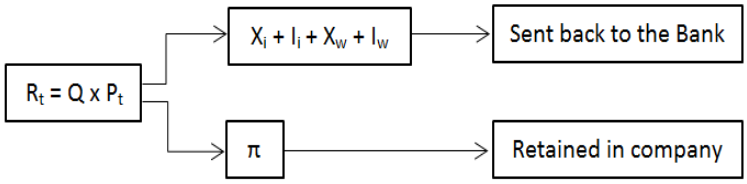

Figure 4. The split of company's revenue

In either case, however, the set price level, P_i, has dilemma: If P_i is set low enough, i.e. the product price is inexpensive, then customer will be satisfied but R_i will be violated. On the contrary, if P_i is set high enough, then R_i will be satisfied but customer's willingness to pay will be violated. Therefore, in order to satisfy both, P_i must be set accordingly. The effect of set price level on revenue is presented in Figure 5.

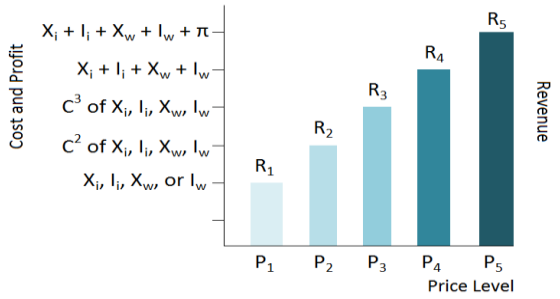

Figure 5. The effect of the set price level on revenue

It can be verified from Figure 5that price is the instrument for the business to use to regain all of its used up money. As can be seen that at the price level P1 even though all products may be sold out, its revenue, R1= P1 x Q, can only cover Xi, Ii, Xw, or Iw. It is arguable to say that there is no reason for business to set the price at P1 or if it does, it will suffer high debt and failure. The same story will happen even if the price is set a slightly higher to P2 or P3; their corresponding revenue R2 and R3 will not be enough to compensate either one or two of Xi, Ii, Xw, and Iw.

Even at the price level P4 its revenue R4 seems to cover almost all of the used up money, the business will not set the price of the product at that price simply because R4does not provide any profit. Therefore, in order the business to secure all of its payment to the Bank as well as to make profit it must set the price of its product at level P5. At this level its revenue R5 not only be able to payback all of the loans plus interests but also it provides profit for the company.

The price of the product at P5 has three meanings: (1) this high price is attributable the loan bearing interest as P5 tells that its componentsconsist of Xi, Ii, Xw, Iw (investment's principal, investment's interest, working capital principal, and working capital interest). In other words, the cause of the price to increase (high price) is the charged interest to the loan(Frankel, 2012), and (2) the business is facing a high risk of customer's refusal that potentially leads to sluggish business so that Q will be far below its expected so the revenue R5 is likely not to be achieved, and (3) in order to achieve R5 the business must set targeted daily, weekly, or monthly sales. The targeted sales are stringently controlled and monitored since if there is unachieved target it can be a sign that the business will have a serious financial problem.

At the very end, the customer is the party that has no choice but to accept whatever the price will be. In this type of economic environment the customer has no or very little access to what the price comprise of. It is easy to see from Figure 4 that customer pays product that they think the product'sreal price which actually he/she gives more money than he/she should be in order the producer (the borrower) to return loan and interest to the Bank. From these views, structurally it can be said that high price of product not because of inflation but it is due to the interest-bearing loan. Evidently, it can be seen from above discussion that there is no inflation element involved in the price structure.

Partnership Financing System

As oppose to the loan system described previously, this article presents an alternative financing system called **partnership financing system** in which two or more parties bind together to form a business venture. As defined in the Basic Definition section the partnership system differs from the loan system in that the money involved in this system is not loan instead it is part of ownership. Therefore, in this system there is no payment of principal or interest required since it is not a loan. The other inherent different of this system from the loan system is that this system is characterized by profit and loss or risk sharing agreed byinvolved parties through contract.Steenbergenand El Ansari (2003) characterize partnership as powerful, a way of thinking, a mindset, anart and a science. It canhelp people to recognize problems clearly and enable them to findthe best solutions and so partnerships carry great promise.

The partnership system is by no means widely practiced today and facing some obstacles (Brandstetter *et al.*, 2006) since what is now dominating system is the loan financing system. This is also the reason this article is trying to introduce this system in order to compare between these two systems so as to clarify and understand their effect on the price of product. To explain the way partnership system works, its simplified mechanism is presented in Figure 6.

In Figure 6 the terms money owner and technical owner are used to indicate two involved parties. The money owner is the party who put some money in the business in which his/her direct involvement in the business activities is not requirement. In contrast, the technical owner is the party who engages directly in the business activities due to his/her expertise; he/she may or may not have the ownership of the business in term of money.

Therefore, it should be obvious that in the partnership system the business will run because of the roles of those two involved parties. A close similar interdependency between the money owner

and the technical owner is like that of between fuel and machine to run a vehicle. The money of the money owner is just like fuel to energize the expertise of the technical owner.

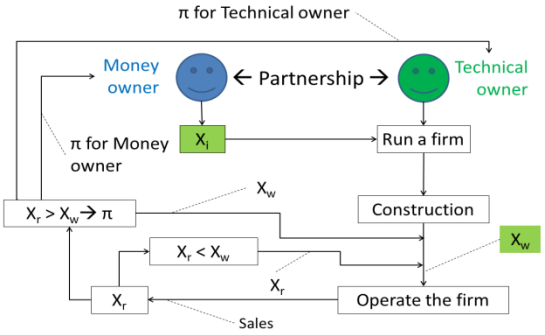

Figure 6. Partnership financing system representation of the problem under consideration

Money owner needs technical owner by whom his/her money will be utilized to benefitothers and technical owner needs money owner with whom his/her expertise will be implemented to produce needed product by which benefit will be generated. In other words, the partnership system will work well if there are interdependencies at equal right between the two involved parties (Brandstetter *et al*, 2006).

To prevent complexity let's assume a simple scenario: the money owner will provide all of the required money and the technical owner will operate the business. In Figure 6 it can be seen that with lump sum money of X_i, the technical owner constructs required production facilities. Upon completed with this construction, the money owner then supplies another X_w to operate the facilities in order to manufacture saleable product. Now, the money owner understands that his/her $X_i$and $X_w$have been converted into production facilities and saleable product at the quantity of Q, i.e. his/her money has change dequivalently into tangible physical assets.

With this Q quantity of product, the business must set the price. It is easy to see that in this partnership system the price setting is intended only to cover working capital, Xw, and profit,π. The reason is that the business facilities can be operated if working capital is available although there is no profit because the profit is not the reason to run the facilities. By referencing to Figure 5, it is arguable that the business in partnership system can operate even though the price is set to P1. However, with the intention of securing the business's profit, the price P2 will suffice the intention.

Suppose that if Xr is sales at P2 price level, then Xr is Q x P2. By using Figure 5 it can be shown that Xr> Xw + π which means that at P2the business is able make profit. Based on the contract, the resulted profit will be shared between the involved parties at the proportion as stated in the agreed contract and the remaining Xw will then be used to repeat the production. If at the P2 price level business has made a profit, it is unquestionably that at the price level higher that P2 business will certainly make even more profit. If business stays in P2, it means increasing its product competitiveness while saving customer's expenses.

In order to see the effect in downward direction, the business is still able to operate even if the product is set to the price level P1 since at this level the sales Xr is still able to cover all of the working capital expenses Xw. Of course, at P1 business is not able to provide profit, however it is to show how tough this partnership system is to the price changes even to the lowest one.

The business of the partnership system will suffer a little problem only if the sales Xr drops below Xw. This instance will happen as a result of the price drops below P1 or the sold quantity less than Q. Only in this case the business under partnership system will suffer loss. Under this circumstance both party will experience loss sharing in which the money owner will loss his/her money and the technical owner will have his/her effort unpaid.Fortunately, even both parties experience loss sharing, yet the business is still able to operate even though must run under capacity since operated at Xrworking capital less than Xw.

Then the next question will be "what if Xr is zero?" And, the answer will be even in this worst situation, the business under partnership remains relaxing because it means that the business still holds some inventories as its valuable asset. The business under partnership can wait until sometime later until remaining inventory sold out, i.e. it has no targeted sales to achieve.

TheComparison of the Two Financing Systems

It can be inferred from the previous discussion that regardless of their similarities, the two systems indicate some contrast comparisons. The first is characterized by loan and ownership. In the loan financing system as long as the loan has yet returned to the Bank, actually the ownership of the financed facilities belongs to the Bank. Consequently, the business must pay the charged interest that will become one of the price components causing price of the product to increase. In the partnership system, in contrast, there is no loan involved and hence there is no interest included in the price component. It is because the ownership of the facilities belongs to the business and so the business has no obligation to pay for ownership.

The above difference indicates that in the partnership system the investment has returned already while in the loan systemthe investment has yet returned until the borrower payback all of the borrowed investment to the Bank plus its interest.

For this reason the loan system implements what so called return on investment term while the partnership system needs no such term. It is also important to see that in the loan system that by the time the investment is returned, the production facilities have been worn out due to time while in the partnership system the technical owner (the business) operates the brand new facilities owned by business.

The comparisons just mentioned are the main reason for the two systems to set the price differently of which the loan system causing high and increasing product price in the market. Base on the above arguments, the set price of the partnership system is different significantly from that of the loan system. In partnership system, if Pt is the targeted price, then Pt will not contain any interest of investment or working capital. In addition Pt also will not contain any investment element. Therefore, in the case of price setting the two financing systems can be compared accordingly by lookingat the price by which the targeted revenue will make business to operate.

In the loan system Rtis Q x $P_t$that must be greater than $X_i + I_i + X_w + I_w + \pi$ and based on Figure 5 P_t must be set to P_5. In comparison with the partnership system, here $R_t$is Q x P_t needs only to cover $X_w + \pi$ and P_t is set to P_2. The cause-and-effect relationship will explain why the business in the loan system will never set the price to P_2 as that of the partnership system. If P_2 only covers X_w, the business in the loan system will not be able to pay X_i, I_i, and I_w and it will cause the Bank to confiscate the business's collateral and the business will have a bad credit record. Therefore, the effect of setting down the price has a big impact on business continuityin the loan system environment while in the partnership system the price has been set at that level with no harm to the business continuity whatsoever.

Numerical Example

To elucidate the proposed arguments, in what follow the article presents a simplified numerical example (the currency unit is omitted): Suppose an entrepreneurhas an investment plan for his new venture. The production facilities and their installment will cost 1000 and working capital will cost 500. With these investment costs structure, he estimates that his venture will be able to produce 100 units of product.In order to finance his venture the entrepreneur considers and compares the loan and the partnership schemes as shown in following results:

Under the loan system, the entrepreneur assumes that he will get both investment and working capital loan at the same interest rate of 10%. And then, the money lender requires the entrepreneur to return his loan plus its interest according to the set schedule.

With those requirements, the entrepreneur understands that he must set the price to the 100 units of his projected product in order to satisfy the requirements. In doing so, he tries to break the price into its comprising components as follow:

1. In order to pay back his 1000 investment loan, each of his 100 products will be charged 1000/100 = 10. Let this charged investment loan component as P_1.
2. Similarly, each unit of his product must be charged 500/100 = 5 for working capital loan. Let this charged component as P_2.
3. Then, to pay off the interest of investment loan, each of them must be charged 10% x 1000 = 100/100 = 1. Let this charged investment interest component as P_3.
4. In the same way to pay the interest of working capital loan, it must be charged 10% x 500 = 5/100 = 0.5. And, let this component of working capital interest charge as P_4.
5. The total of each charged component,which is 10 + 5 + 1 + 0.5 = 16.50,is the minimum charged cost to each of the product.

Of those calculations, the entrepreneur puts this result asa basis in determining the minimum selling price for his product under the loan system. If he plans to gain profit of 7, he may want to add up this profit to his previous total resulting 16.50 + 7 = 23.5. Figure 7 visualizes the effect of the number of set price component into the price level to the sales/revenue.

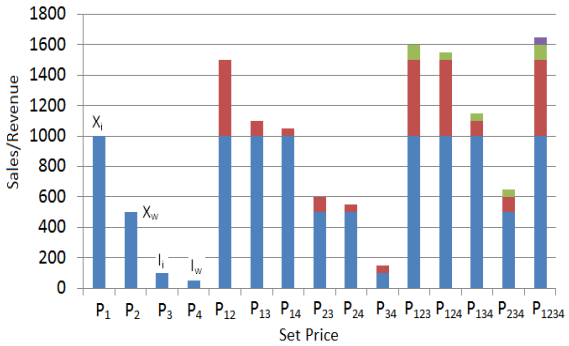

Figure 7. The effect of set price component into price on sales/revenue

It can be seen from Figure 7 that if the price of the product is set to P_1, the earned revenue is just enough to pay off the investment loan (X_i). The situation is even worse if the price is set to P_2, P_3, or even P_4 since the earned revenue is far lower than that of at P_1. The earned revenue seems much better at the price level P_{12} (increased P_1 by P_2), but at this two joined components price level the earned revenue still cannot cover the charged interests, $I_i + I_w$. If P_{12} is then increased again by I_i to P_{123}, the resulting revenue still cannot cover the loan plus its interest. Therefore, P_{123} level is raised again to P_{1234}

to cover the whole loan plus interest but profit. The entrepreneur is now thinking what if the loan is due tomorrow while today's sales show behind target? For sure, he is facing financial problem such as bad credit or loosing collateral.

Having done with the loan system, the entrepreneur starts to figure out the partnership system. Under this system he assumes that there is a partner who offers his money to run his promising new venture. By keeping all of the other setting remains the same, the entrepreneur notices that there are some differences from the loan system that lead the entrepreneur to set the price differently. The main different is that in the partnership system there is no obligation to repay principal and its interest. Therefore, in setting the price the two interest components, P_3 and P_4, may be removed from the structure leaving only P_1 and P_2. Of these two components there also still opportunity to remove one of them without violating the production run.

If the price is set to P_1, the sales or revenue earned of 10 x 1000 = 1000 certainly can cover not only the 500 of working capital but also provide profit. Even if the price is set to P_2, the sales of 5 x 100 = 500 will be enough to cover working capital so as to maintain production run. These results show that the pricing in the partnership system has no effect in price increase. Let say the business under partnership system experiences slow and all sales are behind target. Even in the sluggish business situation like that, the entrepreneur has nothing to worry since he has no scheduled return on investment or working capital to the money owner. To deal with this situation business under partnership system can wait until the business back to normal.

CONCLUSION AND SUGGESTION

The article has shown the different effects of two types of business financing system on setting the product price. Mathematically it has shown that the higher price of product is attributable to the interest-bearing loan systemcurrently in effect while in the partnership system it shows no indication to cause the price to increase.

Structurally, the price level (high or low) is due to the number of comprising component of the price. In the loan-bearing financing system, the reason to its high price is because its price structure contains four components that must be included, namely component of investment and its interest as well as working capital and its interest. On the other hand, due to the absent of interest, in the partnership system those two components of interest are removed causing the price to decrease. It is also arguable that the price structure in partnership system may only contain one component that lead to the price level in this system even further decreased to the lowest level possible.

Out of the findings, itis notedthat the price will keep increasing until the partnership financing system comes to effect. The inflation must not be the prime cause of price increase but it must be the interest-bearing financing system. Therefore, it is evidence that the partnership financing system is the right solution to stop the price increase.

In order to collect more evidences the article suggests to compare the mechanism of proposed partnership system and the so called profit-sharing of most of the Islamic Banking. Due to the lack of loss-sharing, most of the current practice of financing system by the banking system including those of Islamic cannot be categorized as partnership system.

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REFERENCES

Appelbaum E B. 2004. The Consumer Price Index and Inflation - Calculate and Graph Inflation Rates. Convergence, Mathematical Association of America

Bagus P, Howden D, and Gabrie, A. 2014. Causesand consequences of inflation.*Business and Society Review.*119(4).

Ball L. 1993. What Causes the Inflation. Federal Reserve Bank of Philadelphia.

Behrens W and Hawranek P M. 1991. Manual for the Preparation ofIndustrialFeasibility Studies. United Nations Industrial Development Organization (UNIDO), Vienna.

Bonnici TS and Channon DF. 2014. *Pricing Strategy. Wiley Encyclopedia of Management.* Cooper CL[ed]. John Wiley & Sons, Ltd.

BPS (Indonesian Central Bureau of Statistics). 2018. The Average Rice Price in the Wholesale Level in Indonesia (Rupiah/Kg). https://www.bps.go.id/

Brandstetter R, de Bruijn H, Byrne M, Deslauriers H, Förschner M, Machačová J, Orologa A, Scoppetta A. 2006. Successful Partnerships: A Guide. OECD LEED, Forum on Partnerships and Local Governance, Vienna, Austria.

Casares M. 2002. Price Setting and the Steady-State Effects of Inflation. Working Paper Series,

Working Paper No. 140, European Central Bank.

Cusmano L. 2015. New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments. OECD Centre for Entrepreneurship.

Dolgui A and Proth JM. 2010. Pricing strategies and models. *Annual Reviews in Control*. 34 (1).

Encarta Dictionary Tools, 2005. Microsoft® Encarta® Reference Library. Microsoft Corporation.

Fontagne L, Mitaritonna C, Laborde D. 2008. Impact Study of the Eu-Acp Economic Partnership Agreements (Epas) in the Six ACP Regions. Commission of the European Union - Directorate General for Trade, EU.

Frankel JA. 2012. Outlook: Commodity prices and interest rates. *Cooperative Bank* (*COBANK*). 9 (10).

Franz WW. 1978. A solution to problems arising from inflation when determining damages. *J Risk and Insurance*. 45 (2).

Gopinath G. 2015. The International Price System. Harvard University and National Bureau of Economic Research (NBER).

Hall ER. 1977. Investment, Interest Rates, and the Effects of Stabilization Policies. The MassachusettsInstitutof Technology.

Mishkin FS. 1984. The Causes of Inflation. National Bureau of Economic Research.

Ngai JL, Qu J, Yung W, Tan C, Chen H, Aquino, M, Salatiello G. 2016. McKinsey Corporate Banking, China.

Patrinos H A, Osorio FB, Guáqueta J. 2009. The Role and Impact of Public-Private Partnerships in Education. The International Bank for Reconstruction and Development, Washington.

Saenz F. 2011. Alternative solutions to the problem of inflation. *J Forum for Social Economics*.Volume 5, 1975 Published Online 23 Dec 2011.

Steenbergen G and El Ansari W. 2003. The Power of Partnership. Geneva: World Health Organization.

Suseno and Astiyah S. 2009. Inflation. The Center for Education and Study of Central Bank (PPSK). Bank Indonesia.

Weller CE and Chaurushiya R. 2004. *The Effects of Higher Interest Rates onConsumers and the Economy.* Washington DC: Center for American Progress.

Zimbroff AD and Schlake MR. 2015. Introduction to Pricingfor a Product or Service. Division of the Institute of Agriculture and Natural Resources, the University ofNebraska.